

**Arctic Strategic Transportation and Resources (ASTAR) - Phase 2**      **FY2021 Request: \$2,900,000**  
**Reference No: 62649**

**AP/AL:** Appropriation      **Project Type:** Energy  
**Category:** General Government  
**Location:** Statewide      **House District:** Statewide (HD 1-40)  
**Impact House District:** Statewide (HD 1-40)      **Contact:** Raquel Solomon-Gross  
**Estimated Project Dates:** 07/01/2020 - 06/30/2025      **Contact Phone:** (907)465-2422

**Brief Summary and Statement of Need:**

The Arctic Slope Transportation and Resources (ASTAR) project is a collaborative effort initiated by the Department of Natural Resources (DNR) to form a cooperative group of stakeholders in the Northern region. This group guides the development of future infrastructure projects to best benefit the communities of the North Slope by identifying material sites and water sources critical to resource development, mitigating geologic hazards impacting critical facilities, attracting new petroleum investors, and providing access to areas that may require remediation from previous exploration activities. This is Phase 2 of 4 phases planned to develop resources that empower Alaska's Arctic communities.

<b>Funding:</b>	<b>FY2021</b>	<b>FY2022</b>	<b>FY2023</b>	<b>FY2024</b>	<b>FY2025</b>	<b>FY2026</b>	<b>Total</b>
1004 Gen Fund	\$2,900,000						\$2,900,000
<b>Total:</b>	<b>\$2,900,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,900,000</b>

<input type="checkbox"/> State Match Required	<input type="checkbox"/> One-Time Project	<input type="checkbox"/> Phased - new	<input type="checkbox"/> Phased - underway	<input checked="" type="checkbox"/> On-Going
0% = Minimum State Match % Required		<input type="checkbox"/> Amendment	<input type="checkbox"/> Mental Health Bill	

**Operating & Maintenance Costs:**

	<u>Amount</u>	<u>Staff</u>
Project Development:	0	0
Ongoing Operating:	0	0
One-Time Startup:	0	
<b>Totals:</b>	<b>0</b>	<b>0</b>

**Prior Funding History / Additional Information:**

Sec1 Ch1 SLA2019 P5 L10 SB2002 \$2,500,000  
 Sec19 Ch1 SLA2017 P22 L21 SB23 \$7,303,482

Phase 3 is set to begin in June of 2021, and Phase 4 will end in 2026.

**Project Description/Justification:**

The Arctic Strategic Transportation and Resources (ASTAR) project is an effort to identify regional infrastructure needs. Through the ASTAR effort, alliances with willing Arctic communities and stakeholders have been formed to collaborate on opportunities that strengthen community infrastructure and facilitate access to Arctic resources. The goal is to identify infrastructure opportunities that offer the most cumulative benefit and best enhance the quality of life for the region.

This project addresses the highest priority data gaps identified during the ASTAR project that the division can address in a timely and cost-efficient manner. This project will support natural outgrowth of ASTAR and empower Alaska's Arctic communities through continued engagement with federal land managers and delivery of resource information critical to community infrastructure planning, proposal, and development. The following will be included in this phase of the project:

- Sand and gravel survey in the Coastal Plain (\$750,000)

Because it is expensive to transport sand and gravel, identifying where the location of construction-quality sand and gravel resources are will help communities estimate the costs of new infrastructure and facilitates industry development.

- Water resource survey of the Coastal Plain (\$800,000)

This is to collect information about water depths and fish presence, which will inform water needs for ice road and ice pad construction. Temporary ice infrastructure allows for seasonal transportation associated with construction operations and resource development activities (exploration, development drilling, and oil production) in areas with limited or nonexistent gravel roads.

- Coastal hazards assessment for North Slope communities and facilities (\$350,000)

Identify areas near North Slope coastal communities and development centers that are vulnerable to flooding and coastal erosion. Providing data on erosion rates and flooding along the coast will support development projects, community connectivity, public safety, and community resilience.

- Petroleum geology fieldwork from the eastern National Petroleum Reserve in Alaska (NPR-A) to the Arctic National Wildlife Refuge (ANWR) coastal plain will provide regional and reservoir-scale geologic data for the Nanushuk, Torok, Seabee, Tuluva, and associated petroleum-significant rock units (\$1,000,000). This work will include shallow coring of the Nanushuk, Seabee, and Tuluva formations at several locations. The industry relies on publicly available geological information when deciding where to invest in seismic, exploration, and development activities. Because Alaska is a resource-rich state, making this information available attracts investment.

This work has not been previously proposed. Budgets were developed as part of a four-year program by subject-matter experts to address the four phases of this project. Staffing required to complete this work will be a mix of existing staff, and non-permanent project staff.

### **Position Detail**

#### **Existing Positions:**

Full-time Geologist IV (10-2237), R21, located in Fairbanks

Full-time Geologist IV (10-2227), R21, located in Fairbanks

Full-time Geologist IV (10-2225), R21, located in Fairbanks

Full-time Geologist IV (10-2133), R21, located in Fairbanks

Full-time Geologist II (10-2124), R17, located in Fairbanks

**Arctic Strategic Transportation and Resources (ASTAR) - Phase 2****FY2021 Request:  
Reference No:****\$2,900,000  
62649**

Full-time Geologist II (10-2035), R17, located in Fairbanks  
Full-time Geologist IV (10-2016), R21, located in Fairbanks  
Full-time Geologist IV (10-1875), R21, located in Anchorage  
Full-time Geologist IV (10-4248), R21, located in Fairbanks  
Full-time Petroleum Geologist I (10-X013), R26, located in Fairbanks  
Long-term non-permanent Natural Resource Technician I (10-N2002), R10, located in Anchorage  
Long-term non-permanent Natural Resource Specialist III (10-N19007), R18, located in Fairbanks  
Long-term non-permanent Geologist II (10-N19048), R17, located in Fairbanks  
Long-term non-permanent Geologist I (10-N19064), R15, located in Anchorage  
Long-term non-permanent Geologist I (10-N18050), R15, located in Fairbanks  
Long-term non-permanent GIS Analyst II (10-N20007) R17, located in Fairbanks  
College Intern (10-I029), R8, located in Fairbanks  
College Intern (10-I026), R8, located in Anchorage  
College Intern (10-I016), R8, located in Anchorage

**What was accomplished with prior funding?**

The Department of Natural Resources (DNR) has effectively spent and allocated funds appropriated for ASTAR (FY18-FY20) to execute key objectives and facilitate the State's participation in complementary planning efforts, such as for oil and gas leasing with the newly defined Coastal Plain. Specific accomplishments include:

- (1) Provided technical assistance on the interdisciplinary team (IDT) to help write the Affected Environment section of the Environmental Impact Statement (EIS) for the Coastal Plain leasing program in accordance with the Tax Act and National Environmental Policy Act (NEPA) and to identify existing sources of information/data, within the 1-year timeline for the entire NEPA process (April 2018 to April 2019);
- (2) Completed pre-Phase 1 activities to collect preliminary data needed to produce digital maps and associated geospatial data files that identify potential sources of construction materials within the northern National Petroleum Reserve in Alaska (NPR-A), including targeted fieldwork and helicopter-supported drilling to ground truth desktop terrain-unit and surficial-geologic mapping; and
- (3) Initiated Phase 1 activities to compile sand and gravel data east to Kaktovik, plan additional drilling for construction materials exploration in NPR—A, prepare for airborne geophysical surveys and data collection to evaluate water resources of the Coastal Plain, begin baseline data collection and field mapping of coastal hazards, and plan petroleum geology field mapping at Slope Mountain and Shale Wall.

**Line Item Detail**

Line Item	Amount
1000 Personal Services	\$847,900
2000 Travel	\$167,500
3000 Services	\$1,807,000

**Arctic Strategic Transportation and Resources (ASTAR) -  
Phase 2**

**FY2021 Request: \$2,900,000**  
**Reference No: 62649**

4000 Commodities	\$77,600
5000 Capital Outlay	
7000 Grants	
<b>Total Request</b>	<b>\$2,900,000</b>

**Arctic Strategic Transportation and Resources (ASTAR) - Phase 2**      **FY2021 Request: \$2,900,000**  
**Reference No: 62649**

**AP/AL:** Appropriation      **Project Type:** Energy  
**Category:** General Government  
**Location:** Statewide      **House District:** Statewide (HD 1-40)  
**Impact House District:** Statewide (HD 1-40)      **Contact:** Raquel Solomon-Gross  
**Estimated Project Dates:** 07/01/2020 - 06/30/2025      **Contact Phone:** (907)465-2422

**Brief Summary and Statement of Need:**

The Arctic Slope Transportation and Resources (ASTAR) project is a collaborative effort initiated by the Department of Natural Resources (DNR) to form a cooperative group of stakeholders in the Northern region. This group guides the development of future infrastructure projects to best benefit the communities of the North Slope by identifying material sites and water sources critical to resource development, mitigating geologic hazards impacting critical facilities, attracting new petroleum investors, and providing access to areas that may require remediation from previous exploration activities. This is Phase 2 of 4 phases planned to develop resources that empower Alaska's Arctic communities.

<b>Funding:</b>	<b>FY2021</b>	<b>FY2022</b>	<b>FY2023</b>	<b>FY2024</b>	<b>FY2025</b>	<b>FY2026</b>	<b>Total</b>
1004 Gen Fund	\$2,900,000						\$2,900,000
<b>Total:</b>	<b>\$2,900,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,900,000</b>

<input type="checkbox"/> State Match Required	<input type="checkbox"/> One-Time Project	<input type="checkbox"/> Phased - new	<input type="checkbox"/> Phased - underway	<input checked="" type="checkbox"/> Ongoing
0% = Minimum State Match % Required		<input type="checkbox"/> Amendment	<input type="checkbox"/> Mental Health Bill	

**Operating & Maintenance Costs:**

	<u>Amount</u>	<u>Staff</u>
Project Development:	0	0
Ongoing Operating:	0	0
One-Time Startup:	0	
<b>Totals:</b>	<b>0</b>	<b>0</b>

**Prior Funding History / Additional Information:**

Sec1 Ch1 SLA2019 P5 L10 SB2002 \$2,500,000  
 Sec19 Ch1 SLA2017 P22 L21 SB23 \$7,303,482

Phase 3 is set to begin in June of 2021, and Phase 4 will end in 2026.

**Project Description/Justification:**

The Arctic Strategic Transportation and Resources (ASTAR) project is an effort to identify regional infrastructure needs. Through the ASTAR effort, alliances with willing Arctic communities and stakeholders have been formed to collaborate on opportunities that strengthen community infrastructure and facilitate access to Arctic resources. The goal is to identify infrastructure opportunities that offer the most cumulative benefit and best enhance the quality of life for the region.

This project addresses the highest priority data gaps identified during the ASTAR project that the division can address in a timely and cost-efficient manner. This project will support natural outgrowth of ASTAR and empower Alaska's Arctic communities through continued engagement with federal land managers and delivery of resource information critical to community infrastructure planning, proposal, and development. The following will be included in this phase of the project:

- Sand and gravel survey in the Coastal Plain (\$750,000)

Because it is expensive to transport sand and gravel, identifying where the location of construction-quality sand and gravel resources are will help communities estimate the costs of new infrastructure and facilitates industry development.

- Water resource survey of the Coastal Plain (\$800,000)

This is to collect information about water depths and fish presence, which will inform water needs for ice road and ice pad construction. Temporary ice infrastructure allows for seasonal transportation associated with construction operations and resource development activities (exploration, development drilling, and oil production) in areas with limited or nonexistent gravel roads.

- Coastal hazards assessment for North Slope communities and facilities (\$350,000)

Identify areas near North Slope coastal communities and development centers that are vulnerable to flooding and coastal erosion. Providing data on erosion rates and flooding along the coast will support development projects, community connectivity, public safety, and community resilience.

- Petroleum geology fieldwork from the eastern National Petroleum Reserve in Alaska (NPR-A) to the Arctic National Wildlife Refuge (ANWR) coastal plain will provide regional and reservoir-scale geologic data for the Nanushuk, Torok, Seabee, Tuluva, and associated petroleum-significant rock units (\$1,000,000). This work will include shallow coring of the Nanushuk, Seabee, and Tuluva formations at several locations. The industry relies on publicly available geological information when deciding where to invest in seismic, exploration, and development activities. Because Alaska is a resource-rich state, making this information available attracts investment.

This work has not been previously proposed. Budgets were developed as part of a four-year program by subject-matter experts to address the four phases of this project. Staffing required to complete this work will be a mix of existing staff, and non-permanent project staff.

### **Position Detail**

#### **Existing Positions:**

Full-time Geologist IV (10-2237), R21, located in Fairbanks  
Full-time Geologist IV (10-2227), R21, located in Fairbanks  
Full-time Geologist IV (10-2225), R21, located in Fairbanks  
Full-time Geologist IV (10-2133), R21, located in Fairbanks  
Full-time Geologist II (10-2124), R17, located in Fairbanks

**Arctic Strategic Transportation and Resources (ASTAR) - Phase 2****FY2021 Request:  
Reference No:****\$2,900,000  
62649**

Full-time Geologist II (10-2035), R17, located in Fairbanks  
Full-time Geologist IV (10-2016), R21, located in Fairbanks  
Full-time Geologist IV (10-1875), R21, located in Anchorage  
Full-time Geologist IV (10-4248), R21, located in Fairbanks  
Full-time Petroleum Geologist I (10-X013), R26, located in Fairbanks  
Long-term non-permanent Natural Resource Technician I (10-N2002), R10, located in Anchorage  
Long-term non-permanent Natural Resource Specialist III (10-N19007), R18, located in Fairbanks  
Long-term non-permanent Geologist II (10-N19048), R17, located in Fairbanks  
Long-term non-permanent Geologist I (10-N19064), R15, located in Anchorage  
Long-term non-permanent Geologist I (10-N18050), R15, located in Fairbanks  
Long-term non-permanent GIS Analyst II (10-N20007) R17, located in Fairbanks  
College Intern (10-I029), R8, located in Fairbanks  
College Intern (10-I026), R8, located in Anchorage  
College Intern (10-I016), R8, located in Anchorage

**What was accomplished with prior funding?**

The Department of Natural Resources (DNR) has effectively spent and allocated funds appropriated for ASTAR (FY18-FY20) to execute key objectives and facilitate the State's participation in complementary planning efforts, such as for oil and gas leasing with the newly defined Coastal Plain. Specific accomplishments include:

- (1) Provided technical assistance on the interdisciplinary team (IDT) to help write the Affected Environment section of the Environmental Impact Statement (EIS) for the Coastal Plain leasing program in accordance with the Tax Act and National Environmental Policy Act (NEPA) and to identify existing sources of information/data, within the 1-year timeline for the entire NEPA process (April 2018 to April 2019);
- (2) Completed pre-Phase 1 activities to collect preliminary data needed to produce digital maps and associated geospatial data files that identify potential sources of construction materials within the northern National Petroleum Reserve in Alaska (NPR-A), including targeted fieldwork and helicopter-supported drilling to ground truth desktop terrain-unit and surficial-geologic mapping; and
- (3) Initiated Phase 1 activities to compile sand and gravel data east to Kaktovik, plan additional drilling for construction materials exploration in NPR—A, prepare for airborne geophysical surveys and data collection to evaluate water resources of the Coastal Plain, begin baseline data collection and field mapping of coastal hazards, and plan petroleum geology field mapping at Slope Mountain and Shale Wall.

**Line Item Detail**

Line Item	Amount
1000 Personal Services	\$847,900
2000 Travel	\$167,500
3000 Services	\$1,807,000

**Arctic Strategic Transportation and Resources (ASTAR) -  
Phase 2**

**FY2021 Request: \$2,900,000**  
**Reference No: 62649**

4000 Commodities	\$77,600
5000 Capital Outlay	
7000 Grants	
<b>Total Request</b>	<b>\$2,900,000</b>